

=====

Sequence Listing could not be accepted.

If you need help call the Patent Electronic Business Center at (866)
217-9197 (toll free).

Reviewer: markspencer

Timestamp: [year=2008; month=8; day=1; hr=17; min=1; sec=20; ms=803;]

=====

Reviewer Comments:

<210> 1

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Artificial Peptide Sequence

<210> 2

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Artificial amino acid sequence

<210> 14

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Artificial nucleic acid sequence

"Artificial Peptide Sequence", "Artificial amino acid sequence", and
"Artificial nucleic acid sequence" are all insufficient responses for
numeric identifier <223>. Please explain the source of the genetic
material. If the sequence is put together from several organisms, please
list those organisms. If the sequence is made in the laboratory, please

indicate that the sequence is synthesized. These errors appear in other sequences in the sequence listing. Please make all necessary changes.

Application No: 09631613

Version No: 2.0

Input Set:

Output Set:

Started: 2008-06-27 14:14:17.279

Finished: 2008-06-27 14:14:19.635

Elapsed: 0 hr(s) 0 min(s) 2 sec(s) 356 ms

Total Warnings: 83

Total Errors: 0

No. of SeqIDs Defined: 89

Actual SeqID Count: 89

Error code	Error Description
W 213	Artificial or Unknown found in <213> in SEQ ID (1)
W 213	Artificial or Unknown found in <213> in SEQ ID (2)
W 213	Artificial or Unknown found in <213> in SEQ ID (3)
W 213	Artificial or Unknown found in <213> in SEQ ID (4)
W 213	Artificial or Unknown found in <213> in SEQ ID (5)
W 213	Artificial or Unknown found in <213> in SEQ ID (6)
W 213	Artificial or Unknown found in <213> in SEQ ID (7)
W 213	Artificial or Unknown found in <213> in SEQ ID (8)
W 213	Artificial or Unknown found in <213> in SEQ ID (9)
W 213	Artificial or Unknown found in <213> in SEQ ID (10)
W 213	Artificial or Unknown found in <213> in SEQ ID (11)
W 213	Artificial or Unknown found in <213> in SEQ ID (12)
W 213	Artificial or Unknown found in <213> in SEQ ID (13)
W 213	Artificial or Unknown found in <213> in SEQ ID (14)
W 213	Artificial or Unknown found in <213> in SEQ ID (15)
W 213	Artificial or Unknown found in <213> in SEQ ID (16)
W 213	Artificial or Unknown found in <213> in SEQ ID (17)
W 213	Artificial or Unknown found in <213> in SEQ ID (20)
W 213	Artificial or Unknown found in <213> in SEQ ID (21)
W 213	Artificial or Unknown found in <213> in SEQ ID (22)

Input Set:

Output Set:

Started: 2008-06-27 14:14:17.279
Finished: 2008-06-27 14:14:19.635
Elapsed: 0 hr(s) 0 min(s) 2 sec(s) 356 ms
Total Warnings: 83
Total Errors: 0
No. of SeqIDs Defined: 89
Actual SeqID Count: 89

Error code

Error Description

This error has occurred more than 20 times, will not be displayed

W 402

Undefined organism found in <213> in SEQ ID (47)

SEQUENCE LISTING

<110> Hogrefe, Holly
 Hansen, Connie J

<120> Polymerase Enhancing Factor (PEF) Extracts, PEF Protein
 Complexes, Isolated PEF Proteins, and Methods for Purifying and
 Identifying Them

<130> 10070431-07-US

<140> 09631613
 <141> 2000-08-04

<150> US 08/957,709
 <151> 1997-10-24

<150> US 08/822,774
 <151> 1997-03-21

<160> 89

<170> PatentIn version 3.4

<210> 1
 <211> 15
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Artificial Peptide Sequence

<220>
 <221> misc_feature
 <222> (1)..(2)
 <223> Xaa can be any naturally occurring amino acid

<220>
 <221> misc_feature
 <222> (13)..(15)
 <223> Xaa can be any naturally occurring amino acid

<400> 1

Xaa Xaa Leu His His Val Lys Leu Ile Tyr Ala Thr Xaa Xaa Xaa
 1 5 10 15

<210> 2
 <211> 15
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Artificial amino acid sequence

```

<220>
<221> misc_feature
<222> (1)..(3)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (7)..(8)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (10)..(10)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (12)..(12)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (14)..(15)
<223> Xaa can be any naturally occurring amino acid

<400> 2

Xaa Xaa Xaa Pro Asp Trp Xaa Xaa Arg Xaa Glu Xaa Leu Xaa Xaa
1          5          10          15

<210> 3
<211> 35
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial peptide sequence

<220>
<221> misc_feature
<222> (1)..(1)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (14)..(14)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (15)..(15)
<223> Xaa can be any naturally occurring amino acid

```

```

<220>
<221> misc_feature
<222> (21)..(21)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (29)..(30)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (32)..(35)
<223> Xaa can be any naturally occurring amino acid

<400> 3

Xaa Leu Leu His His Val Lys Leu Ile Tyr Ala Thr Lys Xaa Arg Xaa
1 5 10 15

Leu Val Gly Lys Xaa Ile Val Leu Ala Ile Pro Gly Xaa Xaa Ala Xaa
20 25 30

Xaa Xaa Xaa
35

<210> 4
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial peptide sequence

<220>
<221> misc_feature
<222> (1)..(3)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (7)..(8)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (10)..(10)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (12)..(12)
<223> Xaa can be any naturally occurring amino acid

```

<220>
<221> misc_feature
<222> (14)..(14)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (16)..(18)
<223> Xaa can be any naturally occurring amino acid

<400> 4

Xaa Xaa Xaa Pro Asp Trp Xaa Xaa Arg Xaa Glu Xaa Leu Xaa Glu Xaa
1 5 10 15

Xaa Xaa

<210> 5
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial peptide sequence

<220>
<221> misc_feature
<222> (1)..(1)
<223> Xaa can be any naturally occurring amino acid

<400> 5

Xaa Trp Asp Ala Val Ile Met Ala Ala Ala Val Val Asp Phe Arg Pro
1 5 10 15

Lys

<210> 6
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial peptide sequence

<400> 6

Ala Asp Leu Val Val Gly Asn Thr Leu Glu Ala Phe Gly Ser Glu Glu
1 5 10 15

Asn Gln Val Val Leu Ile Gly Arg
20

<210> 7
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial peptide sequence

<220>
<221> misc_feature
<222> (13)..(13)
<223> Xaa can be any naturally occurring amino acid

<400> 7

Gly Ala Met Leu His His Val Lys Leu Ile Tyr Ala Xaa Lys Leu Arg
1 5 10 15

Lys

<210> 8
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial peptide sequence

<220>
<221> misc_feature
<222> (15)..(15)
<223> Xaa can be any naturally occurring amino acid

<400> 8

Gly Ala Met Leu His His Val Lys Leu Ile Tyr Ala Thr Lys Xaa Xaa
1 5 10 15

Arg Lys

<210> 9
<211> 13
<212> PRT

<213> Artificial Sequence

<220>

<223> Artificial peptide sequence

<400> 9

Met Leu His His Val Lys Leu Ile Tyr Ala Thr Lys Leu

1 5 10

<210> 10

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Artificial peptide sequence

<220>

<221> misc_feature

<222> (2)..(4)

<223> Xaa can be any naturally occurring amino acid

<220>

<221> misc_feature

<222> (8)..(9)

<223> Xaa can be any naturally occurring amino acid

<400> 10

Gly Xaa Xaa Xaa Pro Asp Trp Xaa Xaa Lys Phe Arg Lys Glu Glu Ser

1 5 10 15

<210> 11

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<223> Artificial peptide sequence

<400> 11

Gly Ala Ile Leu Leu Pro Asp Trp Lys Ile Arg Lys Glu Ile Leu Ile

1 5 10 15

Glu

<210> 12

<211> 16

<212> PRT

```

<213> Artificial Sequence

<220>
<223> Artificial peptide sequence

<220>
<221> misc_feature
<222> (1)..(1)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (9)..(9)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (13)..(13)
<223> Xaa can be any naturally occurring amino acid

<400> 12

Xaa Met His His Val Ile Lys Leu Xaa Tyr Ala Thr Xaa Ser Arg Lys
1             5             10             15

<210> 13
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial peptide sequence

<400> 13

Met Leu Tyr Leu Val Arg Pro Asp Trp Lys Arg Arg Lys Glu Ile Leu
1             5             10             15

Ile Glu

<210> 14
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificial nucleic acid sequence

<400> 14
caycaygaha arythattta cgc

```

```

<210> 15
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificial nucleic acid sequence

<220>
<221> misc_feature
<222> (9)..(9)
<223> n is a, c, g, or t

<400> 15
gccatdatna cdgertcgta ttt                                     23

<210> 16
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificial nucleic acid sequence

<400> 16
caycaygaha arythatata cgc                                     23

<210> 17
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificial nucleic acid sequence

<400> 17
ardacdacyt grttttcttc                                       20

<210> 18
<211> 1209
<212> DNA
<213> Pyrococcus furiosus

<220>
<221> misc_feature
<222> (67)..(75)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (930)..(933)
<223> n is a, c, g, or t

```

```

<220>
<221> misc_feature
<222> (1203)..(1203)
<223> n is a, c, g, or t

<400> 18
atgttteacc acgtcaagct aatctacgcc acaaaaagtc gaaagctagt tggaaaaaag 60

atagtcnnnn nnnnnccagg gagtattgcg gctttggatg tgaagccttg tggggacta 120

attaggcatg gggccgaagt teatgcagtg atgagtgagg cagccacca gataattcat 180

ccttatgcat ggaatttgc caggggaaat ccagtcataa ctgagatcac tggatttatc 240

gagcatgttg agtttagcagg ggaacatgag aataaagcag atttaatttt ggtttgtcct 300

gccactgcc acacaattag taagattgca tgtggaatag atgatactcc agtaactaca 360

gtcgtgarca cagcatttcc ccacattcca attatgatag ccccgacaat gcatgagaca 420

atgtacagcg atcccatagt aaggggagaac attgaaaggt taaagaagct tggcgttgag 480

tttataggac caagaattga ggagggaag gcaaaagttg caagcattga tgaatagtt 540

tacagagtta ttaaaaacgt ccacaaaaaa acattggaag ggaagagagt cctagt-aacg 600

gcggggagcaa caagagagta catagatcca ataagattca taacaaatgc cagcagtggg 660

aaaaatgggag tagcgttggc tgaagaagca gatttttagag gagctgttac ctcataaga 720

acaaagggaag gtgtaaagcc ttttagaatc agaaaaatca aattgaaggt tgagacagtg 780

gaagaaatgc tttagcagat tgaaaatgag ttgaggagta aaaagtatga cgtagttatt 840

atggcagctg ctgtaaagca ttttaggcc aaaaattaaag cagagggaaa aattaaaaagc 900

ggaagatcaa taacgataga gctcgttcnn nnnaatccaa aaatcattga tagaataaag 960

gaaattcaac caaatgtett tcttgttgga tttaaagcag aaactcaaa agaaaagctt 1020

atagaagaag gtaaaaagca gattgagagg gccaaagctg acttagtcgt tggtaacaca 1080

ttggaagcct ttggaagcga gaaaaccaa gtagtattaa ttggcagaga tttcacaaaa 1140

gaacttccaa aatataaaa gagagagtta gcagagagaa ttgggatga gatagagaaa 1200

tttctgtccc 1209

<210> 19
<211> 403
<212> PRT
<213> Pyrococcus furiosus

<220>

```

<221> misc_feature
 <222> (23)..(25)
 <223> Xaa can be any naturally occurring amino acid

<220>
 <221> misc_feature
 <222> (311)..(311)
 <223> Xaa can be any naturally occurring amino acid

<220>
 <221> misc_feature
 <222> (401)..(401)
 <223> Xaa can be any naturally occurring amino acid

<400> 19

Met Leu His His Val Lys Leu Ile Tyr Ala Thr Lys Ser Arg Lys Leu
 1 5 10 15

Val Gly Lys Lys Ile Val Xaa Xaa Xaa Pro Gly Ser Ile Ala Ala Leu
 20 25 30

Asp Val Lys Ala Cys Glu Gly Leu Ile Arg His Gly Ala Glu Val His
 35 40 45

Ala Val Met Ser Glu Ala Ala Thr Lys Ile Ile His Pro Tyr Ala Trp
 50 55 60

Asn Leu Pro Thr Gly Asn Pro Val Ile Thr Glu Ile Thr Gly Phe Ile
 65 70 75 80

Glu His Val Glu Leu Ala Gly Glu His Glu Asn Lys Ala Asp Leu Ile
 85 90 95

Leu Val Cys Pro Ala Thr Ala Asn Thr Ile Ser Lys Ile Ala Cys Gly
 100 105 110

Ile Asp Asp Thr Pro Val Thr Thr Val Val Thr Thr Ala Phe Pro His
 115 120 125

Ile Pro Ile Met Ile Ala Pro Ala Met His Glu Thr Met Tyr Arg His
 130 135 140

Pro Ile Val Arg Glu Asn Ile Glu Arg Leu Lys Lys Leu Gly Val Glu
 145 150 155 160

Phe Ile Gly Pro Arg Ile Glu Glu Gly Arg Ala Lys Val Ala Ser Ile

Asp Glu Ile Val Tyr Arg Val Ile Lys Lys Leu His Lys Lys Thr Leu
 180 185 190

Glu Gly Lys Arg Val Leu Val Thr Ala Gly Ala Thr Arg Glu Tyr Ile
 195 200 205

Asp Pro Ile Arg Phe Ile Thr Asn Ala Ser Ser Gly Lys Met Gly Val
 210 215 220

Ala Leu Ala Glu Glu Ala Asp Phe Arg Gly Ala Val Thr Leu Ile Arg
 225 230 235 240

Thr Lys Gly Ser Val Lys Ala Phe Arg Ile Arg Lys Ile Lys Leu Lys
 245 250 255

Val Glu Thr Val Glu Glu Met Leu Ser Ala Ile Glu Asn Glu Leu Arg
 260 265 270

Ser Lys Lys Tyr Asp Val Val Ile Met Ala Ala Val Ser Asp Phe
 275 280 285

Arg Pro Lys Ile Lys Ala Glu Gly Lys Ile Lys Ser Gly Arg Ser Ile
 290 295 300

Thr Ile Glu Leu Val Pro Xaa Asn Pro Lys Ile Ile Asp Arg Ile Lys
 305 310 315 320

Glu Ile Gln Pro Asn Val Phe Leu Val Gly Phe Lys Ala Glu Thr Ser
 325 330 335

Lys Glu Lys Leu Ile Glu Glu Gly Lys Arg Gln Ile Glu Arg Ala Lys
 340 345 350

Ala Asp Leu Val Val Gly Asn Thr Leu Glu Ala Phe Gly Ser Glu Glu
 355 360 365

Asn Gln Val Val Leu Ile Gly Arg Asp Phe Thr Lys Glu Leu Pro Lys
 370 375 380

Met Lys Lys Arg Glu Leu Ala Glu Arg Ile Trp Asp Glu Ile Glu Lys
 385 390 395 400

Xaa Leu Ser

<210> 20
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificial nucleic acid sequence

<400> 20
catagcgaat tcgcaaaacc ttctgcgcta tgg 33

<210> 21
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificial nucleic acid sequence

<400> 21
actacggaat tccacggaaa atgccgctca tcc 33

<210> 22
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificial nucleic acid sequence

<400> 22
ggcgtttcg ttctttctcg 20

<210> 23
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificial nucleic acid sequence

<400> 23
ccatctcag cgccagtttc 20

<210> 24
<211> 23
<212> DNA

<213> Artificial Sequence

<220>

<223> Artificial nucleic acid sequence

<400> 24

gaggagagca ggaaggttg aac 23

<210> 25

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Artificial nucleic acid sequence

<400> 25

gctgggagaa gacttcactg g 21

<210> 26

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Artificial nucleic acid sequence

<400> 26

gagcttgctc aactttatc 19

<210> 27

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Artificial nucleic acid sequence

<400> 27

gatagagata gttcttgag acg 23

<210> 28

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Artificial nucleic acid sequence

<400> 28

cgggatatcg acatttcgc acc 23

<210> 29
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Artificial nucleic acid sequence

 <400> 29
 gagttaaatg cctacactgt atct 24

<210> 30
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Artificial nucleic acid sequence

 <400> 30
 caggactcag aagctgctat cgaa 24

<210> 31
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Artificial nucleic acid sequence

 <400> 31
 ctgcacgtgc cctgtaggat ttgt 24

<210> 32
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Artificial nucleic acid sequence

<220>
 <221> misc_feature
 <222> (15)..(15)
 <223> n is a, c, g, or t

 <400> 32
 ccagaytgga arwknaggaa aga 23

<210> 33
 <211> 23
 <212> DNA

```

<213> Artificial Sequence

<220>
<223> Artificial nucleic acid sequence

<220>
<221> misc_feature
<222> (15)..(15)
<223> n is a, c, g, or t

<400> 33
ccagaytgga arwknagaaa aga                                23

<210> 34
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificial nucleic acid sequence

<220>
<221> misc_feature
<222> (15)..(15)
<223> n is a, c, g, or t

<400> 34
ccagaytgga arwknaggaa gga                                23

<210> 35
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificial nucleic acid sequence

<220>
<221> misc_feature
<222> (15)..(15)
<223> n is a, c, g, or t

<400> 35
ccagaytgga arwknagaaa gga                                23

<210> 36
<211> 84
<212> DNA
<213> Artificial Sequence

<220>

```

<223> Artificial nucleic acid sequence

<220>

<221> misc_feature

<222> (20)..(20)

<223> n is a, c, g, or t

<220>

<221> misc_feature

<222> (65)..(65)

<223> n is a, c, g, or t

<400> 36

cagagtgggc agagaggctn ttgttaaggg gaaattaatc gacgtggaaa aggaaggaaa 60

agtcgntatt cctccaaggg aata

84

<210> 37

<211> 27

<212> PRT

<213> Artificial Sequence

<220>

<223> Artificial amino acid sequence

<220>

<221> misc_feature

<222> (12)..(12)

<223> Xaa can be any naturally occurring amino acid

<220>

<221> misc_feature

<222> (22)..(22)

<223> Xaa can be any naturally occurring amino acid

<400> 37

Glu Trp Ala Glu Arg Le